UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,311	12/15/1999	QIMENG CHEN	10991149-1	7356

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EXAMINER
ROBINSON BOYCE, AKIBA K

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)
	09/464,311	CHEN ET AL.
	Examiner	Art Unit
	Akiba K Robinson-Boyce	3623

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 November 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.
Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a
final rejection under 37 CFR 1.113 may <u>only</u> be either: (1) a timely filed amendment which places the application in
condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued
Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In
no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. In
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP
706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension
fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension
fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or
(2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if
timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in
37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the
issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment
canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the
application in condition for allowance because: *See Continuation Sheet*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly
raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☐ will be entered and an
explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: *1,3,4,6,7,9-11,16-22 and 25-32*.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
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Continuation of 5. does NOT place the application in condition for allowance because: with regard to claims 1 and 28, the applicant argues that Murad fails to teach "...at least one computer program, performed by the profiling engine, and operative to define behavior profiles defined at least in part by probability distributions, using data from the telephone call rcords, as data cubes and derive similarity measures on patterns extrated from the behavior profiles, or does not teach the use of data from telephone call records configured as data cubes. The applicant also argues that Murad fails to disclose multidimensional, multi-level data mining techniques. However, Murad discloses this limitation in Col. 8, lines 61-65, Col. 10, lines 24-36. Here, Murad's method is computer implemented, and the behavior profiles are represented by prototypical first behavior profiles and similarity measures are represented by matches and differences. Also, in Col. 5, lines 10-14, the profile 304 is shown to represent a multi-dimensional probability distribution of calls. As for the use of telephone call records, Murad discloses a programmable controller in Col. 3, lines 25-32, along with telephone call data represented by telephone values in Col. 3, lines 42-59. Furthermore, the applicant argues that Murad fails to disclose count-cubes, sub-cubes, and bag overlap, and does not teach efficient computation over data cubes. Applicant's argue that a distance factor is not the same as bag overlap. However, as disclosed in the prior office action, in Col. 7, lines 41-48, Murad shows that the distance between the qualitative profile and the nearest non-zero daily prototype does not exceed a predetermined threshold value, in this case, the non-negative integer cell value is represented by the non-zero daily prototype and the comparison is represented by the distance. The overlap is shown by the distance between the qualitative profile and the nearest non-zero daily prototype since it is shown that the difference stays at or below the predetermined threshold. As for the count cubes, these are represented in Col. 7, lines 41-48. In this case, Murad shows that the distance between the qualitative profile and the nearest non-zero daily prototype does not exceed a predetermined threshold value. Here, the non-negative integer cell value is represented by the non-zero daily prototype, and represents the count-cube value. In addition, the act of calculating the distance value represents the comparison of corresponding sub-cubes, where the sub-cubes are represented by the comparison of two instances of the second level profile in Col. 8, lines 15-20. The applicants also argue that even though McDonough discloses OLAP, that this reference does not teach the implementation of an "...OnLine Analytical Processing (OLAP) based scalable profiling engine communicating with a data warehouse and operative to build and update customer behavior profiles by mining the customer telephone call records that flow into the data warehouse..." or "...the behavior profiles are providded as two input calling pattern cubes,.C1 and C2, and a similarity cube, Cs, is an output of a comparison between C1 and C2, and wherein C1 and C2 are count-cubes, a sub-cube is treated as a bag, and cell-wise comparison rsults are summarized based on bag overlap, the count cubes having non-negative integer cell values, and the bag·overlap enables comparison of corresponding sub-cubes of distinct count cubes." However, it is the combination of both the Murad and McDonough et al references that disclose these limitations. The McDonough et al reference was introduced to show that OLAP is commonly used in a telecommunications environment. The motivation ot combine these references is the fact that both disclose customer monitoring in a telecommunications environment. Independent claims 11, 17 and 25 are rejected for similar reasons as independent claim 1. Hence, dependent claims 3, 4, 6,7, 9, 10, 16, 18-22 and 26-32 are rejected as well.